UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/399,696	09/21/1999	KEHSING J. CHOU	ST9-99-093	2558

7590   12/21/2005

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EXAMINER
PHAM, HUNG Q

ART UNIT	PAPER NUMBER
2168	

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 October 2005</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,7-9,13-15 and 19-21* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,7-9,13-15 and 19-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

10/03/2005 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1, 7 and 13 have been considered

but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

Claims 1, 7 and 13 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter.

As set forth in MPEP 2106 (II) (A):

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Claims 1, 7 and 13 are directed to a method, apparatus and article of manufacture for searching for data in one or more heterogeneous data sources but the claimed invention as a whole does not produce a useful and tangible result.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

Claims 1-4, 7-10 and 13-16 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ito et al. [5,721,904] in view of Blewett [USP 6,526,448 B1],

Takahashi et al. [USP 6,259,705 B1] and Sun Microsystems [Java Remote Method

Invocation].

Regarding claims 1, 7 and 13, Ito teaches a system, apparatus, and method for

searching for data in one or more heterogeneous data sources within a computer system (Col. 1, Lines 10-

14).

receiving a request for data at a federated data source (As illustrated at FIG. 1, *a request for*

accessing *data at a federated data source* includes Database Driver A and Database Driver B

in the form of SQL_RPC (Col. 8, Lines 15-26)).

selecting one of a plurality of servers to process the request based on a load of the server and based on

whether the server can satisfy the request for data, said server connected to one or more heterogeneous datastores

(Referring back to FIG. 1, Access Management Component 112v as *server connected to*

Database Driver A and Database Driver B as *one or more heterogeneous data stores*. Upon

issuance of SQL_RPC, the name server information processing system is inquired for

connection with Access Management Component 112v (Col. 9, Lines 26-32). The

Name Server Information Processing System 150 keep track the status of each

component 112v or server, where the server in operation is labeled as RUN, the server

in stationary state as STOP, and the server in fault as FAULT. The name server

information processing system 150 replies with the port number and the network

address of the server component if the value held in the status storage region is RUN

(Col. 10, Lines 15-36). As seen, Access Management Component 112v as *server* is

selected to process the request based on whether the server can satisfy the request for data using the status of

each component 112v. Ito further discloses the technique of *selecting* Access

Management Component 112v as *server based on a load* condition of each Access

Management Component 112v at Col. 15, Lines 18-28 and 54-66);

> *wherein the plurality of server form a server hierarchy* (Col. 16, Lines 29-42, numeric

value indicating the load condition is given to a plurality of Access Management

Component 112v, i.e., from 0 to 100, and this indicates *the plurality of server form a server*

hierarchy)

The missing of Ito is the implementation of *Remote Method Invocation* on the server,

upon receiving a request to add an additional RMI server, connecting the additional RMI server to an existing

RMI server in the server hierarchy based on a number of connections of the existing RMI server, and *upon*

receiving a request to delete an existing server in the hierarchy, deleting that server.

However, Blewett teaches the technique of *adding an additional server, connecting the*

additional server to an existing server based on a number of connections of the existing server (Blewett, Col.

2, Line 58-Col. 3, Line 9).

Takahashi teaches the technique of *receiving a request to delete an existing server in the hierarchy, deleting that server* (Col. 2, Lines 1-10, Takahashi discloses the technique of making a change to the server group configuration to delete the server that went down).

RMI method for a remote procedure call to process a task on a remote server computer using stubs and skeleton is disclosed by Sun Microsystems.

As shown in Ito FIG. 14, deleting and adding an additional server is required if the server is down, or the load conditions of the existing servers greater than LMIN. Blewett also suggests failed connection requests are undesirable when server buffers its maximum number of requests.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to add and delete a server, apply Remote Method Invocation into a Remote Procedure Call System in order to maintain the system servers based on load and have a well translation of objects of a distributed system.

Regarding claims 2, 8 and 14, Ito, Blewett, Takahashi and Sun Microsystems, in combination, teach all of the claimed subject matter as discussed above with respect to claims 1, 7 and 13, Ito further discloses the claimed *forwarding the request to the selected server* (Col. 8, Lines 16-26, and Col. 10, Lines 38-44).

Regarding claims 3, 9 and 15, Ito, Blewett, Takahashi and Sun Microsystems, in combination, teach all of the claimed subject matter as discussed above with respect to

claims 2, 8 and 14, Ito further discloses the claimed *forwarding additional requests for similar data to the selected server* (Col. 9, Lines 26-45).

Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. [5,721,904], Blewett [USP 6,526,448 B1], Takahashi et al. [USP 6,259,705 B1], Sun Microsystems [Java Remote Method Invocation] as applied to claims 1, 7, 13, and further in view of Francis et al. [USP 6,772,131 B1].

Regarding claims 19-21, Ito, Blewett, Takahashi and Sun Microsystems, in combination, teach all of the claimed subject matter as discussed above with respect to claims 1, 7 and 13, but does not explicitly teach the claimed *load of the server is based on at least the ratio of a current load of the server and a maximum load of the server*. However, Francis discloses a load balancing based on *the ratio of a current load of the server and a maximum load of the server* (Francis, Col. 6, Lines 4-11). It would have been obvious for one of ordinary skill in the art at the time the invention was made to use the ratio of current load and maximum load to define the load condition of a server in order to distribute the request to an available server.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q. PHAM whose telephone number is 571-272-4040. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JEFFREY A. GAFFIN can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HUNG Q PHAM
Examiner
Art Unit 2168

December 16, 2005